Does Institutional Trust in East Central Europe Differ from Western Europe?

Boda, Zsolt; Medve-Bálint, Gergő

Veröffentlichungsversion / Published Version
Zeitschriftenartikel / journal article

European Quarterly of Political Attitudes and Mentalities EQPAM
Volume 3, No.2, April 2014
ISSN 2285 – 4916
ISSN-L 2285 - 4916

Does Institutional Trust in East Central Europe Differ from Western Europe?

Zsolt Boda and **Gergő Medve-Bálint**
Institute for Political Science
Center for Social Sciences
Hungarian Academy of Sciences

Date of Submission: April 3rd, 2014 *Date of Acceptance: April 23rd, 2014*

Abstract

Compared to Western European countries, the new democracies of East Central Europe (ECE) demonstrate substantially lower levels of institutional trust. Some authors consider this phenomenon as a consequence of the transition process and raise concerns about the public approval and legitimacy of ECE political systems and institutions. Based on the datasets of the European Social Survey (ESS), in this paper we aim to address this issue by shedding light on the possible differences between old and new European democracies regarding the origins and patterns of institutional trust. We especially focus on the micro-level foundations of institutional trust and through a quantitative analysis of the 2010 ESS dataset we find that, overall, similarly to Western Europe, institutional trust in ECE is positively associated with success in social and economic life. We also find that relative to westerners, ECE citizens demonstrate comparable degrees of "materialistic trust" as income levels and trust in institutions are similarly associated with each other across these countries even after controlling for several socio-economic characteristics. In addition, the citizens of new European democracies seem to be equally ready to formulate separate evaluative attitudes towards specific institutions. Our findings suggest that in order to explain the persistently low levels of trust in ECE a greater emphasis should be devoted to how people perceive institutional performance when they formulate their trust judgements towards specific institutions.

Keywords: institutional trust, Eastern and Central Europe, European Social Survey, comparative research.

Corresponding Author: Dr. Zsolt Boda, Senior Research Fellow
Affiliation: Institute for Political Science, Center for Social Sciences at the Hungarian Academy of Sciences
Address: Országház utca 30, 1014 Budapest, Hungary
e-mail: boda.zsolt@tk.mta.hu

European Quarterly of Political Attitudes and Mentalities - EQPAM, Volume3, No.2, April 2014, pp. 1-17.
ISSN 2285 – 4916
ISSN–L 2285 – 4916

EQPAM Volume 3 No.2 April 2014
ISSN 2285 – 4916
ISSN-L 2285 - 4916

1. Introduction

Trust is a complex psychological and social phenomenon: it implies confidence that people or institutions are likely to behave in an expected way [Rose-Ackerman 2001a]. Due to its intriguing nature and alleged importance, trust has gained considerable significance as a research topic in social sciences. As Peter Uslaner put it: "(t)rust brings good things and we should care about it" [Uslaner 2000:581]. The literature distinguishes two main dimensions of trust [Zmerli and Newton 2008]. Social (or interpersonal) trust refers to confidence of people towards other people[1], while institutional trust is trust placed in public institutions. Our paper focuses on the latter, institutional dimension of trust and seeks to analyse and compare its patterns in East Central and Western Europe.

The foundations of institutional trust have long been the target of inquiry for social scientists. First, institutional trust as public trust in the government and in politicians is related to the concept of legitimacy [Beetham 1991]. Since political legitimacy is a prerequisite of democratic politics, the level of public trust in political institutions is a highly important issue in democratic systems. Democratic governments are limited in exercising coercion over their own citizens and for this reason they are bound to co-operate with them. At the same time, higher levels of public trust in the political system involves greater likelihood of civic cooperation [Tyler 2011], which may also positively influence the effectiveness of political institutions. For instance, if people are confident that the laws serve the common good and that the judicial system is both effective and fair, then they are more inclined to obey the law [Tyler 1990; Tyler 2011]. Higher levels of institutional trust are also associated with greater compliance with governmental policies and regulations [Hetherington 2005; Lieberman 2007; Scholz 1998; Weatherford 1992]. In short, higher institutional trust may contribute to more effective institutional performance and easier policy implementation [Tyler 2006].

There seems to be a broad consensus over the many "good things" that trust brings about. That explains why the literature on trust is apparently more concerned with the lack or decline of trust than the other way [see e.g. Etzioni, 1993; Hetherington, 2005; Norris, 1999; Putnam, 2000; Uslaner, 2000]. This concern is even more pronounced in case of the new democracies, like those in East Central Europe (ECE) where low trust levels towards the political system and institutions are usually associated with problems of legitimacy and governance effectiveness [Kornai and Rose-Ackerman, 2004; Rose-Ackerman, 2001b; Sztompka, 1999]. After the change of regime in 1989, the German sociologist, Claus Offe cautioned about the potential pitfalls of transition. He considered this process as having three dimensions: an economic (creating the market economy), a political (creating the institutions of a constitutional democracy) and a social (developing common values and norms for cooperation) one, of which the latter was the most difficult and time consuming to accomplish. He argued that the burdensome transition process and the accompanying economic difficulties could potentially undermine the legitimacy of the infant democratic institutions [Offe 1994:15].

We assume that the mainstream literature on trust, and more particularly, on institutional trust rightly claims that confidence in state institutions is desirable, while low or decreasing trust levels are warning signs about the political system's legitimacy and/or effectiveness problems. It is well known that compared to Western Europe, trust levels are lower in ECE. In this paper we focus on institutional trust and try to shed some light on its foundations, as well as the possible causes of lower trust levels in ECE. We are particularly interested in the micro-level explanations of trust and seek to put under scrutiny an

[1] Note that interpersonal trust can be divided into particularized and generalized trust. The former means that one feels confidence only towards certain social groups (e.g., family, friends etc.), while the latter implies a generally trustful attitude towards strangers, too [Uslaner, 2000]. Forms of particularized trust can be relatively high even in those societies where generalized trust is relatively low.

ISSN 2285 – 4916
ISSN-L 2285 - 4916

argument, which the literature has already posited (and which is implicitly evoked in Offe's proposition) regarding the alleged materialistic attitudes of ECE citizens in terms of trust. We compare data from East Central and Western Europe in order to corroborate or reject the hypothesis that in ECE trust is mainly associated with levels of welfare. We also raise the question whether in their trust judgements ECE citizens are able to evaluate institutions separately or they rather apply a general framework that reflects their personal assessment of the political system.

2. Researching Institutional Trust – An Overview

Finding the roots of institutional trust is one of the primary questions of the field. What is more important in determining the level of institutional trust: micro-level factors (such as income, age etc.), macro-level ones (political culture, level of economic development etc.) or the (perceived) performance of institutions? We start with elaborating on the latter dimension. One may assume that the attributes of institutions influence people's attitudes towards them. For instance, people may trust those institutions more that perform or seem to perform well. In this sense, institutional trust can be interpreted as an expectation that the given institution will produce positive outcomes [Levi and Stoker 2000; Mishler and Rose 2001]. Several empirical findings suggest that perceived institutional performance[2] has an effect upon trust. For instance, a general observation is that trust in government is more volatile than trust in constitutional courts. Presumably, the performance of governments is seen less stable than that of courts. Moreover, people also attribute certain social, economic and political problems to the government, which they are less likely to associate with the constitutional court [Grosskopf 2008]. However, besides institutional performance and effectiveness, there are other factors that may play a role.

Based on the works of Tom Tyler, a less output-oriented interpretation of institutional trust has also gained influence. According to Tyler, institutional trust is an indicator of how respectable or legitimate an institution is in the view of the public. This kind of legitimacy, however, involves normative evaluations that to a great extent pertain to the fairness of procedures applied by the institutions [Tyler 1990; 2006; 2011]. People trust an institution based on perceptions about how it treats them and whether it makes decisions in a fair way. Several scholarly works demonstrated that procedural fairness indeed plays a decisive role in shaping public trust in institutions and cooperation with them [Gangl 2003; Hawdon 2008; Murphy 2005]. Most recently Grönlund and Setälä [2012] showed by analysing European data that institutional trust at the individual level depends both on interpersonal trust and on certain normative expectations posed towards those institutions: "the more people trust other people and the more honest they find the civil servants of their country, the more they trust public institutions" [2012:538]. This is important because it implies that it is possible to increase public trust by improving institutional performance, and, more importantly, by improving the fairness of procedures that a given institution is applying through its operations.

So far we have assumed that the individual properties of institutions, like their (perceived) effectiveness as well as (perceived) fairness shape people's trust towards them. Schweer [1997] argues that this is indeed the case. Data also show that people, who in some ways are involved in a specific institution, are more strongly influenced by their perceptions on institutional performance [Hudson 2006]. However, we would exaggerate if we claimed that only these factors influence institutional trust and downplayed other general socio-economic, cultural or demographic variables that influence patterns of trust. Those variables can work both at the macro and at the micro level.

[2] Note that institutional performance is not always easy to evaluate: it is a construct, and an interesting question is that how this construct is created by personal experience, public opinion, the media etc.

EQPAM Volume 3 No.2 April 2014
ISSN 2285 – 4916
ISSN-L 2285 - 4916

Considering macro-level factors, two of them certainly seem to be relevant. The first one is a general culture of trust. Fukuyama [1996] argued that societies can be characterized either as high-trust or low-trust cultures and this feature is somehow rooted in history. Those approaches that emphasize the role of political culture argue "that institutional trust is exogenous to the political sphere, originating in long-standing and deeply seeded cultural norms and is an emergent property of interpersonal trust which is projected onto political institutions" [Campbell 2004:402]. These approaches hold that institutional trust is part of a larger belief-system that influences how and how much people trust each other or impersonal organisations. To put it simply, the level of institutional trust is higher in societies where – because of specific historical and cultural factors – general social trust is higher [Kunioka and Woller 1999]. Indeed, when analysing European Social Survey (ESS) data, we find that there is a remarkably strong association ($r = 0.96$, $p < 0.001$) between interpersonal trust and institutional trust at the country level (**Figure 1**).[3]

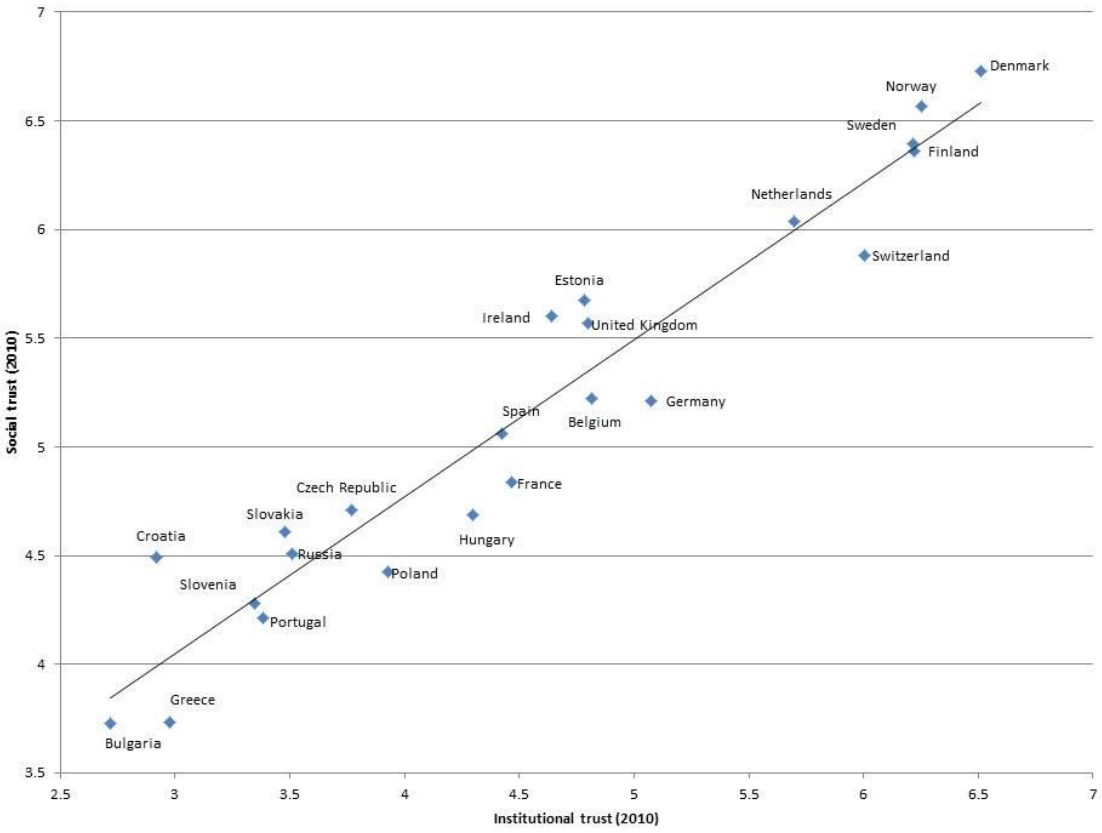


Figure 1.
Association between institutional trust and social trust.
[*Source: Authors' calculation from ESS 2010*].

[3] Please consult the Appendix for the operationalization of the variables.

European Quarterly of Political Attitudes and Mentalities EQPAM
Volume 3, No.2, April 2014
ISSN 2285 – 4916
ISSN-L 2285 - 4916

Among the old European democracies, the Nordic countries demonstrate the highest aggregate levels of trust in both dimensions. This observation also suggests that those scholars who emphasize the role of culture in shaping trust may be right in a sense that the general level of trust (both institutional and interpersonal) can be interpreted as an attribute of a given society. At the same time, it is also possible that another background variable is associated with the two main dimensions of trust. This factor, as suggested by Knack and Keefer [1997] or Dearmon and Grear [2011] can also be the level of economic development. Indeed, as **Figure 2** shows, there is a strong and statistically significant relationship ($r = 0.76$; $p < 0.001$) between the indicator of economic development and institutional trust even though the deviation from the trend line is greater in this case.

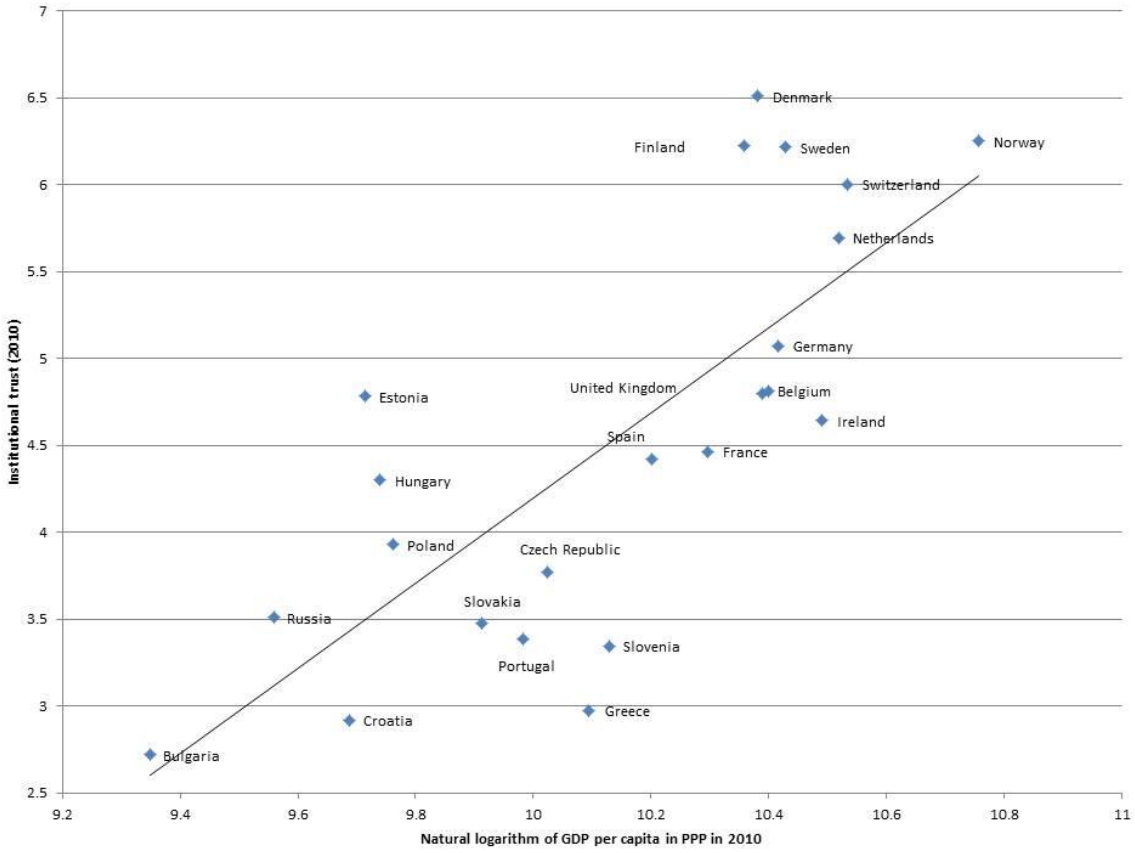


Figure 2.
Association between GDP per capita (2010) and institutional trust (2010).
[*Source: Authors' calculation from ESS 2010 and World Bank data*]

It is important to note that in the two charts the countries take almost identical positions. It follows from this that at the country-level institutional trust, interpersonal trust, and economic development are strongly and positively associated with each other. One may thus assume that certain societal attributes create a favourable atmosphere for trust that may also facilitate economic development, which, in turn may strengthen people's trust towards each other and in public institutions.

EQPAM Volume 3 No.2 April 2014
ISSN 2285 – 4916
ISSN-L 2285 - 4916

However, macro-level factors may not reveal the whole story about the roots and patterns of institutional trust. Those scholars, who focus on the individual (or micro-level) variations in institutional trust argue that factors such as different experiences of socialization, individual political and economic attitudes that people develop to evaluate political institutions are the decisive elements [Rose and Mishler 2011]. In particular, the "winner hypothesis", which assumes that those people show greater trust who are successful in social, economic, and political life, has gained prominence recently [Zmerli and Newton 2011]. However, due to mixed empirical evidence, a debate has emerged about exactly which micro-level factors matter and how in determining institutional trust.

These debates in the trust literature are relevant for East Central Europe as well, because some scholars argue that the micro-level determinants of institutional trust differ in the two sides of Europe. For instance, Catterberg and Moreno [2006] argued that in ECE income was a strong predictor of trust in political institutions both at the individual and at the country level which was not the case in Western Europe. Mishler and Rose [2001] found that unlike in the case of Western Europe, in ECE only age and the size of settlement were significant predictors of trust at the individual level: institutional trust increased with income and age and on average was higher in smaller towns and settlements. In a more recent study, they identified the level of education, age and gender as showing association with institutional trust in ECE: more educated people were less likely to trust political institutions, while trust was significantly higher among older people and women [Rose and Mishler 2011].

In an earlier work, Mishler and Rose [1997] claimed that people in ECE evaluated political institutions according to a general frame, which was strongly determined by the economic situation of the country they lived in. Moreover, they argued that people in new democracies were not capable of distinguishing between specific institutions as they did not make judgements about them on the basis of their individual performance or properties. However, Mishler and Rose analysed data from the early 1990s and they noted that in the course of democratic development people could have become more aware of the differences between political institutions. At the same time, it may also be possible that low levels of institutional trust in ECE are not the consequence of the lack of distinction between institutions but because citizens are generally distrustful of all institutions in this region as they mostly perceive them as political or even corrupt [Marien 2011]. However, if it is true that for one reason or another ECE citizens do not make evaluative judgements about separate institutions, then all what was mentioned above on the role of institutional performance and procedural fairness in determining trust attitudes would not apply to ECE countries. Therefore it is an important issue about which we should gain more insight because it has implications for future researches.

Based on the above discussion, it seems that first, there is a lack of consensus among scholars about which factors influence institutional trust. Second, some researchers make a distinction between old and newer European democracies in terms of the effects of micro-level foundations on institutional trust. This would also suggest that on the two sides of the continent the micro-level factors shape institutional trust in different ways. Third, these differences among East and West are supposed to include the different ability of people in those regions to form evaluative attitudes on individual institutions – which has a clear policy implication about institutional behaviour.

Our paper aims to contribute to these debates although it does not aspire to build a model that comprehensively explains institutional trust including both the exogenous and endogenous variables. Instead, we seek to compare the patterns of institutional trust across Eastern and Western Europe, especially regarding the role of the micro-level factors.

ISSN 2285 – 4916
ISSN-L 2285 - 4916

3. Research Questions

In light of the debates on institutional trust in ECE, we posed the following research questions and hypotheses:

a) Does East Central Europe demonstrate materialistic trust?

Figure 2 above illustrates that income at the country level is strongly associated with trust across Europe. However, we wanted to assess whether the claim of Catterberg and Moreno [2006] still holds that in newer democracies income is a strong predictor of institutional trust also at the individual level. Is it true that East Central Europe demonstrates a kind of "materialistic trust" compared to Western Europe?

(H1) Higher income at the individual level is associated with higher institutional trust.

(H2) This relationship is stronger in ECE than in Western Europe.

b) Individual institutions or general patterns of evaluation?

We wanted to test the thesis of Mishler and Rose [1997] which holds that in new democracies, such as in ECE, people are less capable of differentiating between specific institutions. Instead, they use a general evaluative pattern when they formulate their attitudes towards institutions. This claim suggests that trust indicators of different institutions are strongly associated with each other in ECE. Accordingly, we formulated the following hypothesis:

(H3) Trust in public institutions demonstrates a stronger positive correlation in ECE than in Western Europe.

4. Data and Variables

In order to test our assumptions, we used data from the European Social Survey (2010). The advantage of using ESS data is that it is one of the most reliable cross-national surveys that offers high-quality data [Zmerli and Newton 2008] and covers both the older and newer democracies of Europe. To measure general institutional trust, we calculated an 11-point indicator, by taking the mean value of the valid responses to the question in the ESS databases on trust in the national parliament, in the legal system, in the police and in political parties. Similarly, we created an index for social trust by taking the mean values of the valid responses to the questions on how much people trust each other, how fair people consider their fellow citizens and how helpful they perceive others.

The use of such indexes, especially regarding the proxy for general institutional trust, has been criticized for instance by Fisher et al. [2010] who claim that citizens develop different forms of trust judgements that may vary both in application and significance depending on the given institution. However, based on Almond and Verba [1963], citizens are likely to develop a single comprehensive attitude towards trust in institutions, which is influenced by the political culture prevailing in their country. In a recent study, Sofie Marien brings further empirical support for the claim that "institutional trust can be conceptualised as a one-dimensional attitude" [2011:19].

In order to assess whether these variables of institutional trust and social trust indeed measure the relevant background concepts, we ran a principal component analysis (PCA) on the four indicators of institutional trust and the three indicators of social trust. The PCA showed that the institutional and social trust indicators perform in the same way across all countries.[4] They formed two main components: one of them contained the indicators of institutional trust while the other one incorporated the three indicators of

[4] Countries included from Western Europe: Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Netherlands, Norway, Spain, Sweden, Switzerland, and the United Kingdom. Countries included from Central Europe: Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Poland, Slovakia, and Slovenia.

EQPAM Volume 3 No.2 April 2014
ISSN 2285 – 4916
ISSN-L 2285 - 4916

social trust. The two main components, depending on the country, explained 58-70 percent of the total variance.[5] The results of the PCA therefore suggest that it is appropriate to use these variables for measuring general institutional and social trust.

Furthermore, we also calculated Cronbach's alpha for the indicators used for the two indexes, in order to determine the reliability of these variables. In case of the four components of the institutional trust index, Cronbach's alpha ranged between 0.78 and 0.87 for the country samples, which suggests high reliability. As for the three components of the social trust index, the scores ranged between 0.60 and 0.85, which is also within the acceptable range.[6] This exercise also confirms that our indexes of institutional and social trust are reliable and measure the relevant concepts.

5. Observations at the Micro Level

Our first two hypotheses (H1 and H2) assume that people in ECE demonstrate even more "materialistic" trust than their peers in Western Europe. In order to test this hypothesis with a regression model, we had to control for a series of other micro-level factors, which the literature considers to be important determinants of institutional trust at the individual level. In our model we used the institutional trust index as the dependent variable, while for choosing and specifying the independent variables, we followed the study of Zmerli and Newton [2008]. Among the independent variables we included the above introduced index of interpersonal trust, and indicators of happiness/satisfaction with life, socializing, media consumption, religiosity, and age. We also added dummies for domicile, education, gender, and membership in a minority group.[7]

In addition, to test the claim that ECE citizens demonstrate more materialistic trust than their peers in Western Europe, we also included an income variable from the ESS database, which measures household income of the respondents according to the deciles of the actual household income range in the given country. Each respondent's household income is thus assigned to one of the ten national income deciles. This variable measures the relative wealth of the household on a 10-point scale, where higher values represent higher income deciles. However, while in the case of the other variables missing data were minimal, the income indicator had a lot of missing data points (even up to 30 per cent) in some country samples.

This is problematic, as the high share of missing data may violate the representativeness of the country samples, which could lead to biased estimators in the regression model and incorrect inferences. For this reason, we applied multiple imputation technique in order to impute the missing income values. Multiple imputation is advantageous in that it produces better statistical validity than listwise deletion and is also statistically efficient as it uses the entire dataset in the analysis. We ran five iterations using the fully conditional specification method to ensure that the imputed data do not fall outside the original ranges. Although theoretical concerns have been raised regarding the use of this method, Van Buuren et al. [2006] demonstrated that it appears to produce reasonable multiple imputations with appropriate coverage.

When relatively high number of variables is included into a model, the problem of multicollinearity may arise. Although several independent variables in our model correlated with each other, the coefficients

[5] The only exception was Switzerland, where besides the two principal components of institutional trust and social trust, a third one was also identified from the trust indicators of the parliament, the police and the political parties.

[6] The value of Cronbach's alpha in case of the three components of the social trust index was slightly below 0.65 only for Belgium, France and Spain.

[7] For a full list and operationalization of the variables please consult the Appendix.

ISSN 2285 – 4916
ISSN-L 2285 - 4916

were small (r < .3) and also the variance inflation factor was well below the critical threshold (VIF = 2) in each case. Based on this we do not consider multicollinearity notably affecting the results.

In **Table 1** we report the pooled parameter estimates of the regression model that we ran on each country sample. The relatively low values of adjusted R-squared (between 0.11 and 0.26) suggest that much of the variation is left unexplained even though the set of independent variables are quite comprehensive in terms of the main socio-demographic factors that may influence institutional trust. This suggests that other explanations of trust, either at the macro level or stemming from institutional performance, may indeed also be relevant.

The regression results show some uniform patterns, which are valid across nearly all countries and seem to support the "winner" hypothesis about institutional trust – i.e. that different measures of satisfaction with life seem to be associated with each other. First, all else being equal, social trust and happiness with life is strongly and positively associated with institutional trust. The more socially trusting and happier people tend to report higher trust in public institutions. The effect of these two factors is not only significant but also sizeable. All else being equal, a one point increase in the social trust index is associated, on average, with a minimum increase of 0.15 (Slovakia) and a maximum of 0.45 (Finland) in the institutional trust index. Less strong but still notable is the impact of the happiness factor: a one point increase, on average, leads to a minimum increase of 0.07 (Norway) and a maximum of 0.23 (Bulgaria) in institutional trust. A third, close to uniform and statistically significant pattern is related to religiosity: people who are more religious also tend to trust institutions more. A one-point increase in self-reported religiosity, on average, is associated with a minimum increase of 0.02 (Netherlands) and a maximum of 0.12 (Hungary) in institutional trust.

The income variable mostly shows the expected positive sign in Western Europe (except for Greece and Spain) and is also statistically significant in 8 countries. However, in case of ECE, the results are inconclusive as the sign of the relationship between income and institutional trust is either positive or negative and in most cases statistically not significant (except for Croatia, where income is negatively associated with institutional trust and in Poland, where the relationship is positive). Age also demonstrates dissimilarity between the two country groups: while it is negatively (and in most cases, statistically significantly) associated with institutional trust in Western Europe, results are mixed for Eastern Europe. Namely, in Hungary and Croatia younger people tend to have lower trust in political institutions. Interestingly, with few exceptions, neither media consumption nor the variable measuring how socially active the respondents are show any significant impact on institutional trust.

Regarding the dummy variables, the picture is mixed. The education dummies (basic education and secondary education) mostly show the expected negative sign, which would imply that people with higher education tend to trust institutions more. However, this effect is not statistically significant across all countries thus the results do not allow for drawing a straightforward inference. Nevertheless, there seems to be a pattern that people residing in an urban environment in Western Europe tend to have higher trust levels in institutions, whereas rather the opposite is the case in Eastern Europe, holding all other variables constant. The effects of gender and membership in a minority group on institutional trust suggest that country-specific, contextual factors may shape both the direction and the impact of these variables.

However, to obtain a more nuanced picture of the differences between Eastern and Western Europe, we also ran a separate regression on the combined dataset of all the examined countries. In this model we included a dummy for East Central Europe and its interaction terms with the independent variables. This way it is possible to detect whether the main effects of the predictors differ in the case of East Central Europe. For a more straightforward interpretation of the interaction effects and in order to

EQPAM Volume 3 No.2 April 2014
ISSN 2285 – 4916
ISSN-L 2285 - 4916

substantially reduce multicollinearity, which arises from the inclusion of the interaction terms, we centred the predictors on their mean [see Robinson and Schumacker 2009]. **Table 2** summarizes the results.

Table 2. Pooled parameter estimates of the regression model on the combined dataset (dependent variable: institutional trust)[8]

	B	SE	t	p
(Intercept)	4.688**	0.020	238.054	0.000
social trust	0.439**	0.007	62.797	0.000
happiness	0.198**	0.007	27.078	0.000
socializing	0.018	0.008	2.250	0.318
media consumption	-0.023*	0.006	-4.000	0.030
religiosity	0.057**	0.004	14.455	0.000
income level	0.029**	0.004	6.774	0.000
age	-0.113*	0.027	-4.144	0.027
city resident[1]	0.017	0.023	0.715	0.512
higher education[2]	0.098**	0.023	4.275	0.000
male[3]	0.114**	0.022	5.240	0.000
minority member[4]	0.382**	0.057	6.740	0.000
ECE[5]	-0.735**	0.035	-20.944	0.000
income*ECE	-0.018	0.008	-2.347	0.186
age*ECE	0.085	0.050	1.702	0.213
social trust*ECE	-0.131**	0.011	-11.713	0.000
happiness*ECE	-0.027*	0.011	-2.371	0.023
socializing*ECE	-0.091**	0.013	-6.966	0.000
media consumption*ECE	0.050**	0.010	5.116	0.000
religiosity*ECE	-0.020**	0.007	-2.926	0.004
city resident*ECE	-0.267**	0.041	-6.501	0.000
higher education*ECE	0.024	0.041	0.597	0.363
male*ECE	-0.136**	0.039	-3.506	0.002
minority member*ECE	-0.297*	0.089	-3.323	0.014
F-value	856.26			
N	40705			
adj. R^2	0.324			

* Significant at 5 per cent ** Significant at 1 per cent
Design and population weights applied
Predictors centered on their mean. Unstandardized coefficients, robust standard errors
[1] reference group: town and village residents
[2] reference group: respondents with basic or secondary education
[3] reference group: female respondents
[4] reference group: non-minority respondents
[5] reference group: Western European respondents

[8] The estimated parameters were identical for the second, third, fourth and fifth combined imputed dataset. Thus here we report the pooled parameter estimates of the first and second imputations.

ISSN 2285 – 4916
ISSN-L 2285 - 4916

The intercept shows the average value of institutional trust if all variables take their mean (which is zero in this specification). The ECE dummy is negative and significant, which suggests that if all conditions are the same (all the predictors take their mean value) but the respondent is an ECE citizen, then the average level of institutional trust shifts downwards with 0.73 point. This merely reinforces the empirical observation that institutional trust, on average, is lower in East Central Europe than in Western Europe.

As for the main effects, they seem to bring further evidence in support of the winner hypothesis: social trust, happiness, income and higher education show a positive and significant effect on institutional trust. In addition, religiosity, as expected based on the single country models, is also positively associated with the dependent variable, while age and, interestingly, media consumption demonstrates a significant negative, albeit weak relationship with institutional trust. Socializing and place of residence, however, does not have an effect on the dependent variable.

The interaction terms reveal whether the effect of the predictors on institutional trust differ in the case of East Central Europe.[9] Income, age and higher education do not show significant interaction effects, which imply that the main effects of these independent variables hold throughout the sample. In other words, if the country samples are combined, East Central European citizens do not differ from Western Europeans in that their material well-being (Figure 3), age and level of education equally affects individual levels of institutional trust. This finding is contrary to the results of Mishler and Rose [2011] and supports our first hypothesis on the positive effect of income on institutional trust but refutes the second one, which posited that ECE citizens might demonstrate stronger "materialistic" trust than westerners. In this respect, we find no difference between Eastern and Western Europe.

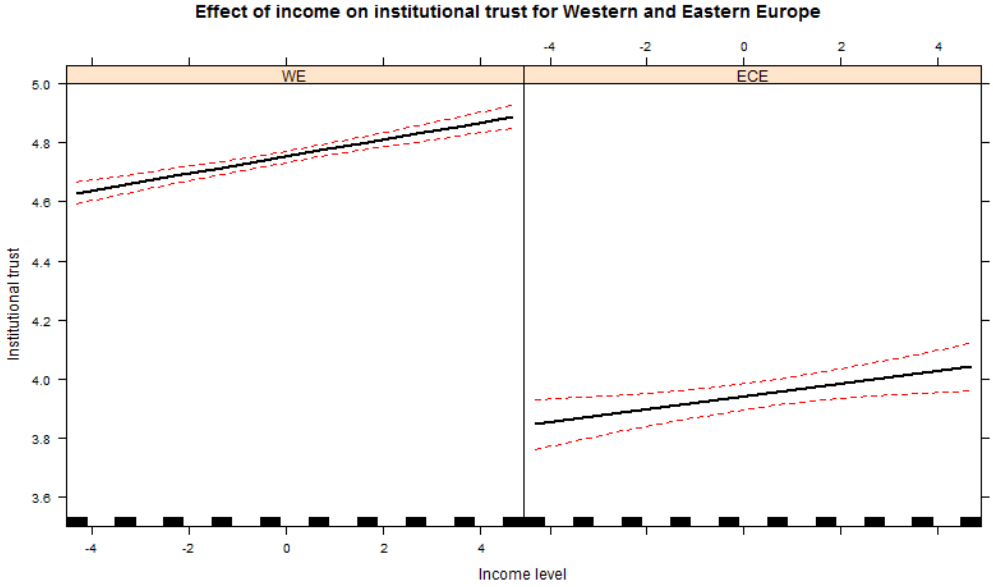
However, the further interpretation of the interaction terms reveals slight differences between the two sides of the continent. While social trust, happiness and religiosity remain positively associated with institutional trust, their coefficients shift downward in ECE indicating that the effect of these predictors on institutional trust is on average somewhat lower in Eastern than in Western Europe. Still, the direction of the relationship with institutional trust remains unaffected, which means that also for ECE we find strong evidence for the assumption that successful people in life are the more trusting.

As the interaction terms demonstrate, three variables change their behaviour in ECE (Figure 3). First, the effect of gender and minority membership disappears. According to the main effect of the gender variable, males trust institutions more than females. However, the interaction term shows that this relationship does not hold in East Central Europe where there is no gender effect on institutional trust. Similarly, all else being equal, minority members trust institutions more but in ECE this is not the case, because minority membership is not associated with trust there. Second, while the main effect of media consumption shows a slight negative relationship on institutional trust, this effect is reversed in ECE: more media consumption leads to greater institutional trust there.

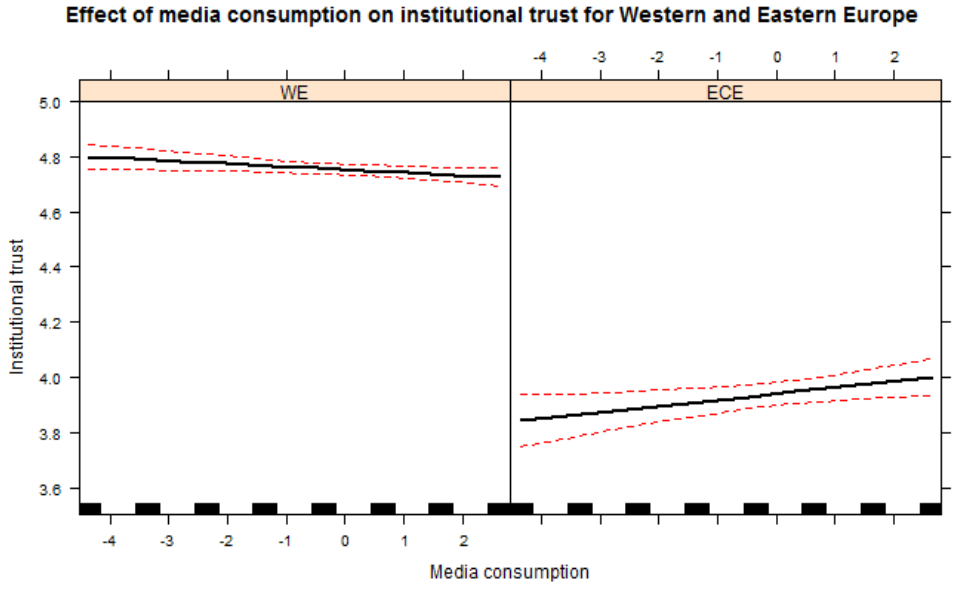
In spite of the slight differences, overall, we find that the same socio-demographic factors produce similar relationships in both parts of the continent: the results suggest that the winner hypothesis holds across ECE and Western Europe as well. In particular, Eastern Europeans do not demonstrate greater "materialistic" trust than their western peers. However, several predictors (such as happiness, social trust and religiosity) show weaker yet still positive effect on institutional trust in ECE than in Western Europe. While we maintain that the effects of micro-foundations on institutional trust are rather similar both in Western and Eastern European countries, the causes of the slight differences are yet to be explored in future research.

[9] We do not interpret significant interaction terms without significant main effects.

EQPAM Volume 3 No.2 April 2014
ISSN 2285 – 4916
ISSN-L 2285 - 4916

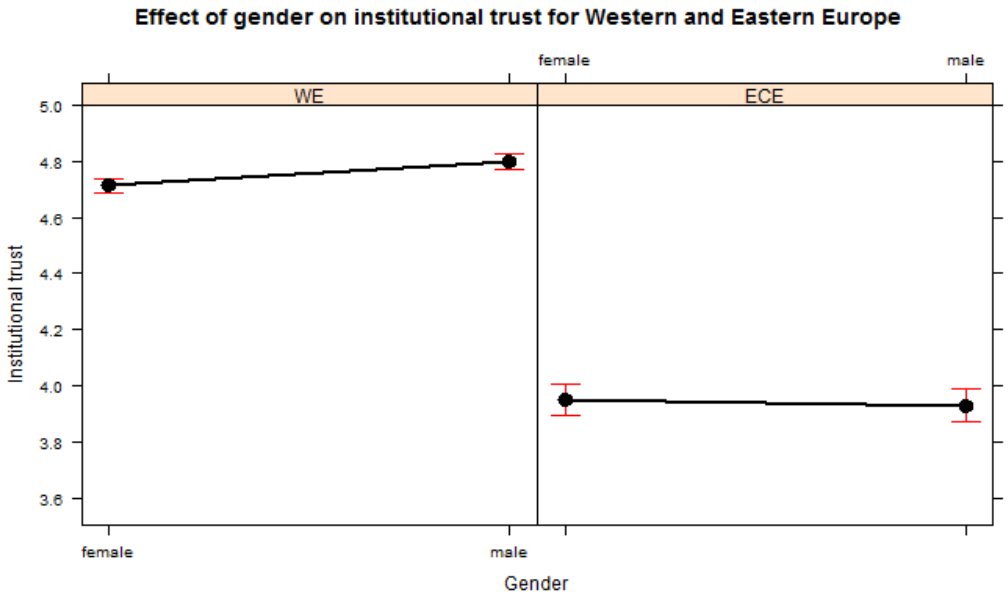


(a)

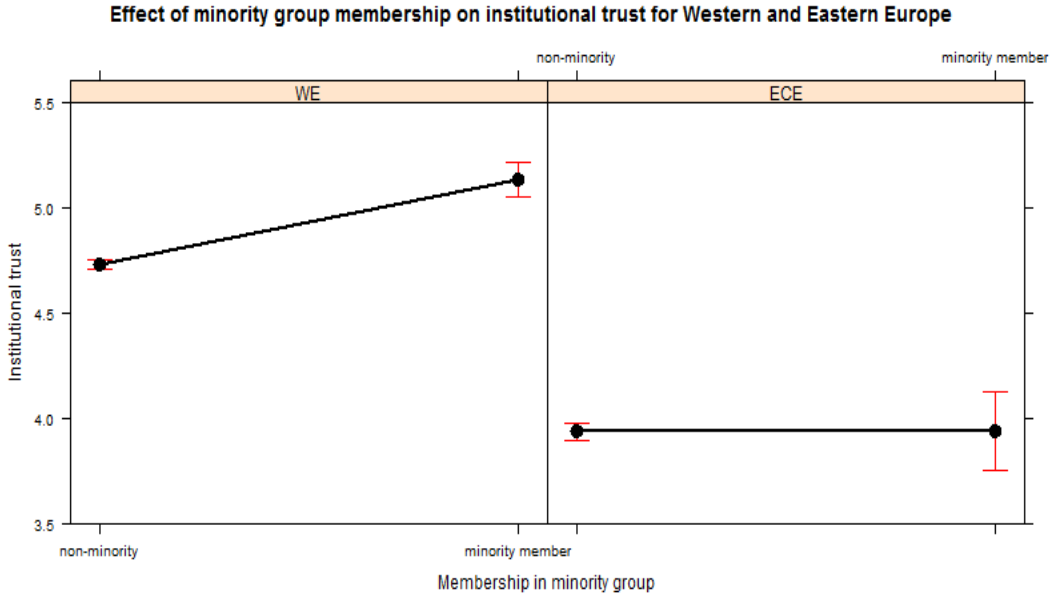


(b)

European Quarterly of Political Attitudes and Mentalities EQPAM
Volume 3, No.2, April 2014
ISSN 2285 – 4916
ISSN-L 2285 - 4916



(c)



(d)

Figure 3.
Effects of selected variables on institutional trust for East Central and Western Europe.
(a)Effects of income on institutional trust for Western and Eastern Europe;
(b) Effects of media consumption on institutional trust for Western and Eastern Europe;
(c) Effects of gender on institutional trust for Western and Eastern Europe;
(d) Effects of minority group membership on institutional trust for Western and Eastern Europe.

EQPAM Volume 3 No.2 April 2014
ISSN 2285 – 4916
ISSN-L 2285 - 4916

4. Individual Evaluation of Institutions in Eastern and Western Europe

According to our third hypothesis (H3), indicators of trust in different political institutions show a stronger association with each other in East Central Europe than in Western Europe. In order to test this assumption, we calculated bivariate correlation coefficients for five variables that measure trust in different institutions in the 2010 ESS database. These indicators were the level of trust in the national parliament, in the legal system, in the police, in politicians, and in political parties.

First, we calculated bivariate correlation coefficients for each possible combination of the above variables and for each country. Next, we divided the countries into two groups: Western European countries[10] and countries of East Central Europe[11]. Within each country group we looked at the range within which the correlation coefficients for every pair of variables vary. In other words, we took the minimum and maximum values of the corresponding correlation coefficients for the country groups. **Figure 4** displays these ranges of the correlation coefficients. The bars in the chart thus show the range in which correlation coefficients for each pairwise combination of institutional trust indicators were spread within a country group.

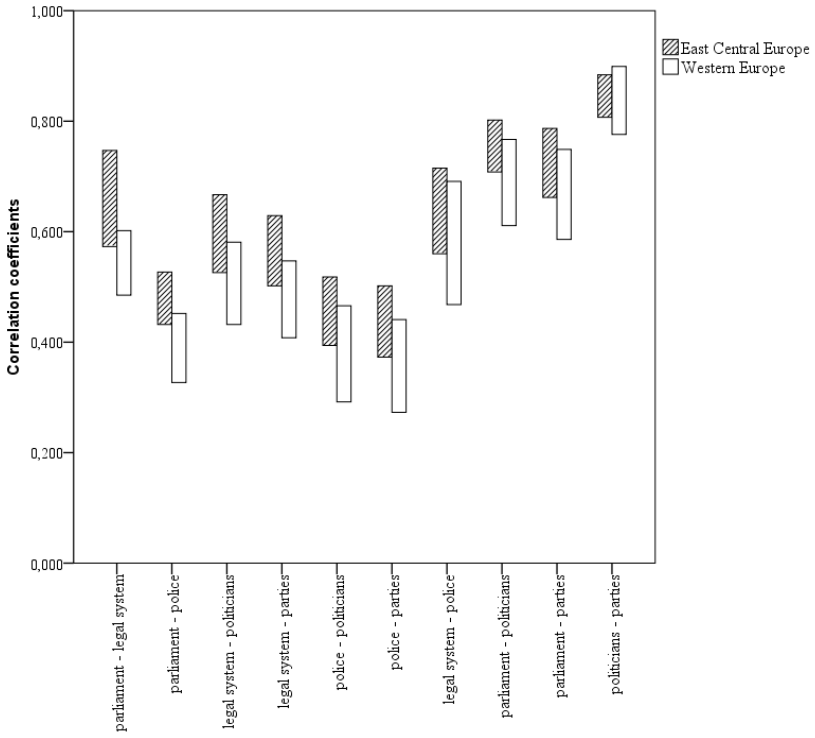


Figure 4.
Range of correlation coefficients between trust in various public institutions in Eastern and Western Europe (2010)

[10] Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Norway, the Netherlands, Portugal, Spain, Sweden, Switzerland and the United Kingdom

[11] Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Poland, Slovakia and Slovenia

ISSN 2285 – 4916
ISSN-L 2285 - 4916

Although there is a statistically significant relationship between each pair of institutional trust indicators, the chart shows that political institutions (parliament, politicians, and parties) tend to have a stronger association with each other than with non-political institutions. In addition, as the range bars demonstrate, correlations between institutional trust indicators are slightly stronger in ECE than in WE. More importantly, the difference in correlations between ECE and WE is greater in the case of pairs of political and non-political institutions than in the case of the purely political pairs. In this respect, the chart reveals a notable difference between the two country groups. Based on the position of the range bars, bivariate associations between trust in a political (parliament, parties, politicians) and a non-political (legal system, police) institution is somewhat stronger in East Central Europe than in Western Europe. This observation implies that ECE citizens' trust judgements about non-political institutions (such as the police and the legal system) may be more influenced by political considerations than it is the case in Western Europe. While this finding needs to be further explored, which is beyond the scope of this article, based on the above empirical evidence ECE citizens do not seem to apply a general evaluative frame towards domestic institutions. Although their trust judgements may be more influenced by political considerations than that of their Western European peers, they seem to be able to distinguish between separate institutions regarding the level of trust they place in them.

6. Conclusions

First, in this paper we showed that at the country level there is a strong relationship between economic development and institutional and interpersonal trust. This is reflected on the patterns of trust in Europe: compared to Western Europe, most of the newer, as well as poorer European democracies score far below in institutional and interpersonal trust. These findings suggest that there may be a complex, probably circular, self-reinforcing causal mechanism between the level of economic development and the general level of interpersonal and institutional trust, although this needs to be further explored.

Second, we sought to answer the question whether countries of East Central Europe differ from Western Europe regarding how micro-level factors affect individuals' institutional trust. Our results suggest that in this respect the two sides of the continent do not substantially differ from each other. Eastern Europeans do not demonstrate greater materialistic trust than westerners and the claim that those who are successful in life are also more trusting seems to hold in both sides of the continent. Yet, there are certain differences between ECE and Western Europe, especially regarding the strength of the effects of the main predictors of trust, which calls for further research.

Third, in this study we demonstrated that compared to western citizens, people in ECE are similarly able to differentiate between specific institutions when forming their trusting attitudes towards them. Although it may be a popular argument that a specific East Central European political culture is responsible for the consistently low or even declining levels of trust in these countries, our results suggest that this tendency may also be influenced by other mechanisms that we did not account for in this study. One may assume that the attributes and properties of the institutions also shape people's attitude towards them. For instance, it is plausible that people place more trust in those institutions that perform their role well or their operation is perceived to be fair. If this holds in ECE, then low levels of institutional trust may be partly determined by the mostly negative public perception of institutions. Our findings that trust in non-political institutions may be more exposed to political considerations in ECE points in this direction of research. This may open a new line of inquiry in the trust literature: besides analyzing the effects of micro and macro level

EQPAM Volume 3 No.2 April 2014
ISSN 2285 – 4916
ISSN-L 2285 - 4916

factors, greater emphasis could be devoted to research on institutional performance and on how people perceive it when forming trusting attitudes towards specific institutions.

References

1. Almond, Gabriel A., and Sidney Verba. 1963. The Civic Culture: Political Attitudes in Five Western Democracies. Princeton: Princeton University Press.
2. Beetham, David. 1991. The Legitimation of Power. Macmillan.
3. Breitmeier, Helmut, Oran R. Young, and Michael Zürn. 2006. Analyzing International Environmental Regimes: From Case Study to Database. Cambridge, MA: The MIT Press.
4. Campbell, William Ross. 2004. "The Sources of Institutional Trust in East and West Germany: Civic Culture or Economic Performance?" German Politics 13(3):401–18.
5. Catterberg, Gabriela, and Alejandro Moreno. 2006. "The Individual Bases of Political Trust: Trends in New and Established Democracies." International Journal of Public Opinion Research 18(1):31–48.Dearmon, Jacob, and Robin Grier. 2011. "Trust and the Accumulation of Physical and Human Capital." European Journal of Political Economy 27(3):507–19.
6. Etzioni, Amitai. 1993. The Spirit of Community: Rights, Responsibilities, and the Communitarian Agenda. New York: Crown Publishers, Inc.
7. European Social Survey Round 5 Data. 2010. Data File Edition 2.0. Norway: Norwegian Social Science Data Services. Retrieved (http://ess.nsd.uib.no).
8. Fisher, Justin, Jennifer Van Heerde, and Andrew Tucker. 2010. "Does One Trust Judgement Fit All? Linking Theory and Empirics." The British Journal of Politics & International Relations 12(2):161–88.
9. Gangl, Amy. 2003. "Procedural Justice Theory and Evaluations of the Lawmaking Process." Political Behavior 25(2):119–49.
10. Grosskopf, Antje. 2008. "Explaining the Democratic Trust Conundrum: The Sources of Institutional Trust in the Reunited Germany." International Social Science Review 83(1-2):3–26.
11. Grönlund, Kimmo, and Maija Setälä. 2012. "In Honest Officials We Trust: Institutional Confidence in Europe." The American Review of Public Administration 42(5):523–42.
12. Hawdon, James. 2008. "Legitimacy, Trust, Social Capital, and Policing Styles." Police Quarterly 11(2):182 –201.
13. Hetherington, Marc J. 2005. Why Trust Matters: Declining Political Trust and the Demise of American Liberalism. Princeton, NJ: Princeton University Press.
14. Hudson, John. 2006. "Institutional Trust and Subjective Well-Being Across the EU." Kyklos 59(1):43–62.
15. Knack, Stephen, and Philip Keefer. 1997. "Does Social Capital Have an Economic Payoff? A Cross-Country Investigation." The Quarterly Journal of Economics 112(4):1251–88.
16. Kornai, János, and Susan Rose-Ackerman. 2004. Building a Trustworthy State in Post-socialist Transition. New York: Palgrave Macmillan.
17. Kunioka, Todd, and Gary M. Woller. 1999. "In (a) Democracy We Trust: Social and Economic Determinants of Support for Democratic Procedures in Central and Eastern Europe." Journal of Socio-Economics 28(5):577–96.
18. Levi, Margaret, and Laura Stoker. 2000. "Political Trust and Trustworthiness." Annual Review of Political Science 3:475–507.
19. Lieberman, Evan S. 2007. "Ethnic Politics, Risk, and Policy-Making. A Cross-national Statistical Analysis of Government Responses to HIV/AIDS." Comparative Political Studies 40(12):1407 –1432.
20. Marien, Sofie. 2011. "Measuring Political Trust Across Time and Space." Pp. 13–46 in Political Trust. Why Context Matters, edited by Sonja Zmerli and Mark Hooghe. ECPR Press.
21. Mishler, William, and Richard Rose. 1997. "Trust, Distrust and Skepticism: Popular Evaluations of Civil and Political Institutions in Post-Communist Societies." The Journal of Politics 59(02):418–51.
22. Mishler, William, and Richard Rose. 2001. "What Are the Origins of Political Trust? Testing Institutional and Cultural Theories in Post-Communist Societies." Comparative Political Studies 34(1):30 –62.
23. Murphy, Kristina. 2005. "Regulating More Effectively: The Relationship Between Procedural Justice, Legitimacy, and Tax Non-compliance." Journal of Law and Society 32(4):562–89.
24. Norris, Pippa. 1999. Critical Citizens: Global Support for Democratic Government. Oxford: Oxford University Press.
25. Offe, Claus. 1994. "Designing Institutions for East European Transitions." in Reihe Politikwissenchaft, vol. 19. Institut für Höhere Studien. Retrieved (http://www.ssoar.info/ssoar/files/2011/1906/1264673992_pw_19.pdf).

ISSN 2285 – 4916
ISSN-L 2285 - 4916

26. Putnam, Robert. 2000. Bowling Alone: The Collapse and Revival of American Community. New York: Simon and Schuster.
27. Robinson, Cecil, and Randall E. Schumacker. 2009. "Interaction Effects: Centering, Variance Inflation Factor, and Interpretation Issues." Multiple Linear Regression Viewpoints 35(1):6–11.
28. Rose, Richard, and William Mishler. 2011. "Political Trust and Distrust in Post-Authoritarian Contexts." Pp. 117–40 in Political Trust. Why Context Matters, edited by Sonja Zmerli and Mark Hooghe. ECPR Press.
29. Rose-Ackerman, Susan. 2001a. "Trust and Honesty in Post-Socialist Societies." Kyklos 54(2-3):415–43.
30. Rose-Ackerman, Susan. 2001b. "Trust, Honesty, and Corruption: Reflection on the State-Building Process." European Journal of Sociology 42(3):526–70.
31. Scholz, John T. 1998. "Trust, Taxes, and Compliance." Pp. 135–66 in Trust and Governance, edited by Valerie Braithwaite and Margaret Levi. New York: Russell Sage Foundation.
32. Schweer, Martin K. W. 1997. "Trust in Central Social Institutions – Results of an Empirical Study of Young Adults." Gruppendynamik-Zeitschrift Fur Angewandte Sozialpsychologies 28:201–10.
33. Sztompka, Piotr. 1999. Trust: A Sociological Theory. Cambridge: Cambridge University Press.
34. Tyler, Tom R. 1990. Why People Obey the Law: Procedural Justice, Legitimacy, and Compliance. New Haven, CT: Yale University Press.
35. Tyler, Tom R. 2001. "Public Trust and Confidence in Legal Authorities: What Do Majority and Minority Group Members Want from the Law and Legal Institutions?" Behavioral Sciences & the Law 19(2):215–35.
36. Tyler, Tom R. 2006. "Psychological Perspectives on Legitimacy and Legitimation." Annual Review of Psychology 57:375–400.
37. Tyler, Tom R. 2011. Why People Cooperate: The Role of Social Motivations. New Jersey: Princeton University Press.
38. Uslaner, Eric M. 2000. "Producing and Consuming Trust." Political Science Quarterly 115(4):569–90.
39. van Buuren, Stef, Jaap P. L. Brand, Karin Groothuis-Oudshoorn, and Donald B. Rubin. 2006. "Fully Conditional Specification in Multivariate Imputation." Journal of Statistical Computation and Simulation 76(12):1049–64.
40. Weatherford, M. Stephen. 1992. "Measuring Political Legitimacy." The American Political Science Review 86(1):149–66.
41. Zmerli, Sonja, and Ken Newton. 2008. "Social Trust and Attitudes Toward Democracy." Public Opinion Quarterly 72(4):706–24.
42. Zmerli, Sonja, and Ken Newton. 2011. "Winners, Losers and Three Types of Trust." Pp. 67–94 in Political Trust. Why Context Matters, edited by Sonja Zmerli and Mark Hooghe. ECPR Press.

APPENDIX. Description of the Variables

Institutional trust: Mean of the valid responses to the questions concerning trust in the national parliament, legal system, police and political parties (0-10)
Social trust: Mean of the valid responses to the questions on "how much do you trust other people?", "how fair do you think other are?"; and "how helpful do you find others?" (0-10)
Happiness/satisfaction with life: Mean of the valid responses to the question of "how happy are you?" and "how satisfied are you with your life?" (0-10)
Socializing: How often do you meet socially with friends, relatives, colleagues? (1: never; 7: every day)
Media consumption: Watching TV on an average weekday (0: no time at all; 7: more than 3 hours)
Religiosity: How religious are you? (0: not at all; 10: very much)
Income: The net total income of the respondent's household classified according to the national income deciles (1 = first decile - lowest income); 10 = tenth decile - highest income)
Age: Natural logarithm of the respondent's age
City resident: Dummy (1 = the respondent lives in a big city or in the suburbs or outskirts of a big city)
Elementary education: Dummy (1 = the respondent has maximum 8 years of completed education)
Secondary education: Dummy (1 = the respondent has 9-12 years of completed education)
Higher education: Dummy (1 = the respondent has more than 12 years of completed education)
Male: Dummy (1 = male respondent)
Minority member: Dummy (1 = the respondent belongs to a minority group)

European Quarterly of Political Attitudes and Mentalities EQPAM
Volume 3, No.2, April 2014
ISSN 2285 – 4916
ISSN-L 2285 - 4916

Does Institutional Trust in East Central Europe Differ from Western Europe?

Zsolt Boda and Gergő Medve-Bálint
Institute for Political Science
Center for Social Sciences
Hungarian Academy of Sciences
Hungary

Date of Submission: April 3rd, 2014 Date of Acceptance: April 23rd, 2014

Corresponding Author: Dr. Zsolt Boda, Senior Research Fellow
Affiliation: Institute for Political Science, Center for Social Sciences at the Hungarian Academy of Sciences
Address: Országház utca 30, 1014 Budapest, Hungary
e-mail: boda.zsolt@tk.mta.hu

European Quarterly of Political Attitudes and Mentalities - EQPAM, Volume3, No.2, April 2014, pp. ...
ISSN 2285 – 4916
ISSN–L 2285 – 4916

EQPAM Volume 3 No.2 April 2014
ISSN 2285 – 4916
ISSN-L 2285 - 4916

Table 1. Pooled parameter estimates of the regression model (dependent variable: institutional trust)

	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Netherlands	Norway	Spain	Sweden	Switzerland	United Kingdom	Bulgaria	Croatia	Czech Republic	Estonia	Hungary	Poland	Slovakia	Slovenia
N	1703	1569	1876	1651	2880	2052	1798	1826	1547	1867	1486	1502	2401	1860	1330	1896	1759	1557	1724	1317	1339
adj. R-squared	0.194	0.192	0.261	0.198	0.238	0.167	0.207	0.257	0.175	0.131	0.208	0.154	0.234	0.156	0.118	0.185	0.218	0.199	0.152	0.114	0.192
F-value	35.046**	32.095**	56.055**	35.021**	75.838**	35.315**	40.042**	53.518**	28.368**	24.535**	33.552**	23.750**	62.152**	29.706**	15.908**	36.768**	41.971**	33.233**	26.879**	15.225**	27.809**
	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)
(Intercept)	3.081** (0.468)	3.876** (0.504)	2.716** (0.429)	2.133** (0.493)	2.956** (0.368)	-2.580** (0.469)	1.898** (0.419)	2.215** (0.452)	3.767** (0.511)	2.145** (0.535)	3.164** (0.456)	5.166** (0.536)	1.739** (0.403)	0.003 (0.611)	-1.047 (0.689)	0.947 (0.519)	0.272 (0.528)	0.271 (0.557)	1.390* (0.504)	1.908** (0.581)	1.326* (0.609)
social trust	**0.382**** (0.029)	**0.330**** (0.031)	**0.455**** (0.026)	**0.338**** (0.030)	**0.363**** (0.020)	**0.285**** (0.021)	**0.290**** (0.027)	**0.442**** (0.026)	**0.405**** (0.030)	**0.343**** (0.029)	**0.348**** (0.030)	**0.331**** (0.029)	**0.418**** (0.025)	**0.235**** (0.025)	**0.165**** (0.028)	**0.305**** (0.025)	**0.347**** (0.028)	**0.312**** (0.028)	**0.314**** (0.025)	**0.151**** (0.028)	**0.335**** (0.026)
happiness	**0.087*** (0.033)	**0.200**** (0.033)	**0.097**** (0.030)	**0.192**** (0.026)	**0.159**** (0.020)	**0.176**** (0.021)	**0.130**** (0.025)	**0.094*** (0.031)	**0.068*** (0.029)	**0.138**** (0.028)	**0.186**** (0.029)	**0.116**** (0.034)	**0.174**** (0.022)	**0.229**** (0.023)	**0.177**** (0.029)	**0.215**** (0.025)	**0.231**** (0.028)	**0.179**** (0.026)	**0.095**** (0.023)	**0.159**** (0.029)	**0.146**** (0.028)
socializing	-0.002 (0.031)	-0.018 (0.032)	0.024 (0.026)	-0.065 (0.030)	0.007 (0.023)	0.004 (0.026)	-0.013 (0.028)	0.016 (0.027)	-0.014 (0.035)	-0.039 (0.028)	-0.028 (0.031)	**-0.053*** (-0.021)	**-0.016**** (0.005)	0.017 (0.029)	0.076 (0.038)	0.015 (0.030)	**0.083*** (0.030)	-0.061 (0.031)	-0.040 (0.029)	**0.077*** (0.033)	-0.015 (0.035)
media consumption	0.003 (0.022)	-0.016 (0.021)	-0.001 (-0.011)	-0.024 (0.022)	0.028 (0.017)	**0.092**** (0.020)	-0.013 (0.020)	-0.033 (0.017)	-0.012 (0.022)	0.017 (0.022)	-0.009 (0.021)	-0.011 (-0.014)	0.009 (0.019)	0.032 (0.027)	0.007 (0.027)	-0.018 (0.023)	-0.010 (0.023)	**0.079**** (0.024)	0.034 (0.020)	**0.089**** (0.026)	0.030 (0.024)
religiosity	**0.080**** (0.014)	**0.052**** (0.016)	**0.091**** (0.013)	**0.086**** (0.015)	**0.078**** (0.011)	**0.064**** (0.019)	**0.106**** (0.017)	**0.025*** (0.011)	**0.056**** (0.015)	**0.100**** (0.016)	**0.034*** (0.014)	**0.054**** (0.016)	**0.092**** (0.013)	**0.047*** (0.019)	**0.114**** (0.022)	**0.075**** (0.017)	0.016 (0.016)	**0.125**** (0.017)	**0.056**** (0.018)	**0.058**** (0.017)	0.031 (0.018)
income	**0.056**** (0.018)	0.028 (0.014)	**0.045**** (0.013)	0.029 (0.017)	**0.046**** (0.013)	-0.027 (0.019)	**0.093**** (0.018)	**0.071**** (0.014)	**0.043*** (0.014)	-0.026 (0.017)	**0.032*** (0.014)	0.003 (0.010)	**0.050**** (0.014)	-0.010 (0.017)	**-0.065*** (0.026)	-0.024 (0.019)	0.017 (0.018)	-0.024 (0.021)	**0.066**** (0.017)	0.019 (0.022)	0.030 (0.022)
age	**-0.436**** (0.093)	**-0.414**** (0.099)	**-0.303**** (-0.053)	-0.182 (0.115)	**-0.473**** (0.081)	**0.673**** (0.117)	-0.222 (0.099)	-0.106 (0.091)	**-0.331**** (0.099)	-0.144 (0.110)	-0.200 (0.092)	**-0.524**** (-0.064)	**-0.279**** (0.019)	0.071 (0.137)	**0.353*** (0.138)	-0.033 (0.114)	0.162 (0.112)	**0.306*** (0.129)	-0.035 (0.112)	**-0.287*** (0.129)	-0.196 (0.129)
city resident	0.186 (0.089)	0.111 (0.076)	**0.164*** (0.071)	**0.258*** (0.093)	0.001 (0.075)	0.090 (0.082)	0.127 (0.079)	0.122 (0.071)	**0.380**** (0.078)	-0.001 (0.087)	0.113 (0.076)	0.095 (0.103)	**-0.087**** (0.016)	**-0.323**** (0.097)	**-0.378**** (0.113)	0.173 (0.086)	-0.151 (0.097)	**-0.245*** (0.102)	-0.031 (0.090)	**-0.551**** (0.118)	0.155 (0.105)
elementary education	**-0.430*** (0.145)	**-0.373**** (0.114)	-0.020 (0.114)	0.085 (0.133)	0.271 (0.145)	0.194 (0.129)	0.065 (0.186)	**-0.279*** (0.127)	-0.077 (0.185)	-0.040 (0.121)	-0.052 (0.139)	0.224 (0.164)	0.438 (0.220)	-0.050 (0.152)	-0.070 (0.184)	0.215 (0.275)	0.007 (0.173)	-0.140 (0.161)	0.125 (0.155)	-0.427 (0.278)	-0.176 (0.148)

EQPAM Volume 3 No.2 April 2014
ISSN 2285 – 4916
ISSN-L 2285 - 4916

secondary education	-0.118	-0.066	-0.007	0.015	-0.112	0.161	0.034	**-0.235****	-0.166	**-0.363****	**-0.251****	-0.198	**-0.306****	-0.100	-0.142	0.097	-0.037	-0.171	-0.065	0.038	-0.200
	(0.087)	(0.087)	(0.015)	(0.093)	(0.065)	(0.098)	(0.093)	(0.073)	(0.084)	(0.102)	(0.082)	(-0.056)	(0.016)	(0.109)	(0.128)	(0.085)	(0.092)	(0.108)	(0.092)	(0.103)	(0.111)
male	0.112	**0.285****	**0.227****	-0.070	**0.183***	0.026	0.325	**0.203****	**0.275****	-0.034	0.127	-0.009	0.061	0.042	**0.366****	-0.028	0.053	-0.079	-0.038	**-0.268****	0.095
	(0.078)	(0.073)	(0.069)	(0.083)	(0.061)	(0.082)	(0.077)	(0.066)	(0.077)	(0.079)	(0.075)	(-0.049)	(0.072)	(0.094)	(0.108)	(0.082)	(0.089)	(0.098)	(0.085)	(0.100)	(0.096)
minority member	-0.013	-0.173	-0.054	-0.014	**0.600****	**0.518***	0.776	-0.136	0.392	0.292	-0.189	**0.527***	**0.468****	**0.624****	0.332	-0.224	-0.311	-0.006	-0.653	0.138	-0.098
	(0.251)	(0.296)	(-0.173)	(0.231)	(0.166)	(0.082)	(0.160)	(0.178)	(0.206)	(0.284)	(0.264)	(0.178)	(0.153)	(0.152)	(0.244)	(0.251)	(0.147)	(0.250)	(0.450)	(0.244)	(0.294)

Unstandardized coefficients, robust standard errors. Design weight applied.
* Significant at 5 % **Significant at 1